

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A low-friction sliding mechanism wherein a low-friction agent composition is interposed between sliding surfaces of a DLC coated sliding member (A) and a sliding member (B), wherein

the DLC coated sliding member (A) is formed by coating diamond-like carbon on a base material;

the sliding member (B) is formed with at least one kind of material selected from a group consisting of a metal material, a non-metal material and a coated material obtained by coating a thin film on a surface of the metal material or the non-metal material; and

the low-friction agent composition contains at least one kind selected from a group consisting of an oxygen-containing organic compound (C) and an aliphatic amine compound (D), the oxygen-containing organic compound (C) being at least one kind selected from a group consisting of alcohols, carboxylic acids, esters, ethers, ketones, aldehydes, carbonates and derivatives thereof,

wherein the oxygen-containing organic compound (C) is contained in the range of 0.05 to 3.0 % mass relative to a total mass amount of the low-friction agent composition,

wherein the carboxylic acids exclude saturated dicarboxylic acid,

wherein the aliphatic amine compound (D) has a hydrocarbon group having 6 to 30 carbon atoms and is contained in the range a of 0.05 to 3.0 % mass relative to a total mass amount of the low-friction agent composition.

2. (Previously Presented) The low-friction sliding mechanism according to claim 1, wherein, in the sliding member (B), the metal material is at least one kind of material selected from a group consisting of a ferrous material, an aluminum alloy material and a magnesium alloy-based material; and the coated material is formed by

coating a thin film of at least one kind of material selected from a group consisting of DLC, TiN and CrN.

3. (Previously Presented) The low-friction sliding mechanism according to claim 1, wherein the coated DLC has a hydrogen content of 20 atomic percent or less.

4. (Previously Presented) The low-friction sliding mechanism according to claim 1, wherein the coated DLC has a hydrogen content of 10 atomic percent or less.

5. (Previously Presented) The low-friction sliding mechanism according to claim 1, wherein the coated DLC has a hydrogen content of 0.5 atomic percent or less.

6. (Previously Presented) The low-friction sliding mechanism according to claim 1, wherein the coated DLC is made of a-C diamond-like carbon that does not contain hydrogen.

7. (Previously Presented) The low-friction sliding mechanism according to claim 1, wherein the oxygen-containing organic compound (C) is at least one kind selected from a group consisting of alcohols, carboxylic acids, esters, ethers, ketones, aldehydes, carbonates and derivatives thereof.

8. (Canceled)

9. (Canceled)

10. (Currently amended) A method of reducing a friction, comprising: friction reduction characterized in that, on sliding surfaces formed of a DLC coated sliding member (A) formed by coating diamond-like carbon and a sliding member (B) that uses at least one kind of material selected from a group consisting of a metal material, a non-metal material and a coated material obtained by coating a thin film on a surface of the metal material or the non-metal material,

supplying a low-friction agent composition containing one that contains at least one kind selected from a group consisting of an oxygen-containing organic compound (C) and an aliphatic amine compound (D) is supplied as a low-friction agent composition to lubricate, on sliding surfaces of a DLC coated sliding member (A) formed by coating diamond-like carbon and a sliding member (B) formed of at least one kind of material selected from a group consisting of a metal material, a non-metal material and a coated material obtained by coating a thin film on a surface of the metal material or the non-metal material so as to lubricate the sliding surfaces, wherein the oxygen-containing organic compound (C) is at least one kind selected from a group consisting of alcohols, carboxylic acids, esters, ethers, ketones, aldehydes, carbonates and derivates thereof,

wherein the oxygen-containing organic compound (C) is contained in the range of 0.05 to 3.0 % mass relative to a total mass amount of the low-friction agent composition, wherein the carboxylic acids exclude saturated dicarboxylic acid,

wherein the aliphatic amine compound (D) has a hydrocarbon group having 6 to 30 carbon atoms and is contained in the range of 0.05 to 3.0 % mass relative to a total mass amount of the low-friction agent composition.

11. (Cancelled)

12. (Previously Presented) A manual transmission characterized by using the low-friction sliding mechanism according to claim 1.

13. (Previously Presented) A final reduction gear unit characterized by using the low-friction sliding mechanism according to claim 1.

14. (Previously presented) A low-friction agent composition that is used in the low-friction sliding mechanism according to claim 1, wherein the low-friction agent composition contains at least one kind selected from the group consisting of an oxygen-containing organic compound (C) and an aliphatic amine compound (D), the oxygen-containing organic compound (C) being at least one kind

selected from a group consisting of alcohols, carboxylic acids, esters, ethers, ketones, aldehydes, carbonates and derivatives thereof.

15. (Previously presented) A low-friction agent composition that is used in the friction reduction method according to claim 10, wherein

the low-friction agent composition contains at least one kind selected from the group consisting of an oxygen-containing organic compound (C) and an aliphatic amine compound (D), the oxygen-containing organic compound (C) being at least one kind selected from a group consisting of alcohols, carboxylic acids, esters, ethers, ketones, aldehydes, carbonates and derivatives thereof.

16. (New) A low-friction sliding mechanism wherein a low-friction agent composition is interposed between sliding surfaces of a DLC coated sliding member (A) and a sliding member (B), wherein

the DLC coated sliding member (A) is formed by coating diamond-like carbon on a base material;

the sliding member (B) is formed of at least one kind of material selected from a group consisting of a metal material, a non-metal material and a coated material obtained by coating a thin film on a surface of the metal material or the non-metal material; and

the low-friction agent composition contains at least one kind selected from a group consisting of an oxygen-containing organic compound (C) and an aliphatic amine compound (D), the oxygen-containing organic compound (C) being at least one kind selected from a group consisting of alcohols, carboxylic acids, esters, ethers, ketones, aldehydes, carbonates and derivatives thereof,

wherein the coated DLC has a hydrogen content of 10 atomic percent or less,

wherein the oxygen-containing organic compound (C) is contained in the range of 0.05 to 3.0 % mass relative to a total mass amount of the low-friction agent composition,

wherein the carboxylic acids exclude saturated dicarboxylic acid,

wherein the aliphatic amine compound (D) has a hydrocarbon group having 6 to 30 carbon atoms and is contained in the range of 0.05 to 3.0 % mass relative to a total mass amount of the low-friction agent composition.

17. (New) A low-friction sliding mechanism wherein a low-friction agent composition is interposed between sliding surfaces of a DLC coated sliding member (A) and a sliding member (B), wherein

the DLC coated sliding member (A) is formed by coating diamond-like carbon on a base material;

the sliding member (B) is formed of at least one kind of material selected from a group consisting of a metal material, a non-metal material and a coated material obtained by coating a thin film on a surface of the metal material or the non-metal material; and

the low-friction agent composition contains at least one kind selected from a group consisting of an oxygen-containing organic compound (C) and an aliphatic amine compound (D), the oxygen-containing organic compound (C) being at least one kind selected from a group consisting of alcohols, carboxylic acids, esters, ethers, ketones, aldehydes, carbonates and derivatives thereof,

wherein the coated DLC has a hydrogen content of 0.5 atomic percent or less,

wherein the oxygen-containing organic compound (C) is contained in the range of 0.05 to 3.0 % mass relative to a total mass amount of the low-friction agent composition,

wherein the carboxylic acids exclude saturated dicarboxylic acid,

wherein the aliphatic amine compound (D) has a hydrocarbon group having 6 to 30 carbon atoms and is contained in the range of 0.05 to 3.0 % mass relative to a total mass amount of the low-friction agent composition.

18. (New) A low-friction sliding mechanism wherein a low-friction agent composition is interposed between sliding surfaces of a DLC coated sliding member (A) and a eliding member (B), wherein

the DLC coated sliding member (A) is formed by coating diamond-like carbon on a base material;

the sliding member (B) is formed of at least one kind of material selected from a group consisting of a metal material, a non-metal material and a coated material obtained by coating a thin film on a surface of the metal material or the non-metal material; and

the low-friction agent composition contains at least one kind selected from a group consisting of an oxygen-containing organic compound (C) and an aliphatic amine compound (D), the oxygen-containing organic compound (C) being at least one kind selected from a group consisting of alcohols, carboxylic acids, esters, ethers, ketones, aldehydes, carbonates and derivatives thereof,

wherein the coated DLC is made of a-C diamond-like carbon that does not contain hydrogen,

wherein the oxygen-containing organic compound (C) is contained in the range of 0.05 to 3.0 % mass relative to a total mass amount of the low-friction agent composition, wherein the carboxylic acids exclude saturated dicarboxylic acid,

wherein the aliphatic amine compound (ID) has a hydrocarbon group having 6 to 30 carbon atoms and is contained in the range of 0.05 to 3.0 % mass relative to a total mass amount of the low-friction agent composition.

19. (New) The low-friction sliding mechanism according to claim 1, wherein the carboxylic acids are selected from the group consisting of aliphatic monocarboxylic acids, unsaturated dicarboxylic acids, aliphatic tricarboxylic acids, carbon-cyclic carboxylic acids, and heterocyclic carboxylic acids.

20. (New) The method according to claim 10 wherein the carboxylic acids are selected from the group consisting of aliphatic monocarboxylic acids, unsaturated dicarboxylic acids, aliphatic tricarboxylic acids, carbon-cyclic carboxylic acids, and heterocyclic carboxylic acids.

21. (New) The low-friction sliding mechanism according to claim 16, wherein the carboxylic acids are selected from the group consisting of aliphatic monocarboxylic acids, unsaturated dicarboxylic acids, aliphatic tricarboxylic acids, carbon-cyclic carboxylic acids, and heterocyclic carboxylic acids.

22. (New) The low-friction sliding mechanism according to claim 17, wherein the carboxylic acids are selected from the group consisting of aliphatic monocarboxylic acids, unsaturated dicarboxylic acids, aliphatic tricarboxylic acids, carbon-cyclic carboxylic acids, and heterocyclic carboxylic acids.

23. (New) The low-friction sliding mechanism according to claim 18, wherein the carboxylic acids are selected from the group consisting of aliphatic monocarboxylic acids, unsaturated dicarboxylic acids, aliphatic tricarboxylic acids, carbon-cyclic carboxylic acids, and heterocyclic carboxylic acids.